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IN THE

Supreme Court of the United States

October Term, 1960

No. 501

BINKS MANUFACTURING COMPANY,

Petitioner,

vs.

RANSBURG ELECTRO-COATING CORP.,

Respondent.

On Writ of Certiorari to the United States Court of Appeals for the Seventh Circuit

APPENDIX TO BRIEF FOR RESPONDENT RANSBURG ELECTRO-COATING CORP.

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APPENDIX TO BRIEF FOR RESPONDENT

FINDINGS OF FACT AND CONCLUSIONS OF LAW WITH SUPPORTING REFERENCES TO TRANSCRIPT OF RECORD

All footnotes to the Findings contain references to the location of the supporting material in the Transcript of Record filed herein, and delete all references not reprinted.

The statements of fact appearing in the introduction to the Court's findings are all supported by the findings themselves. References to the transcript are therefore omitted from the introductory statement.

The following references are used in the footnotes to the findings:

Transcript of Record	"R. "
Official Reporters' Transcript	"Tr. "
Plaintiff's Exhibit	"Px. "
Defendant's Exhibit	"Dx. "

The witnesses and deponents are identified by last name only, with the exception of Harold and Edwin Ransburg.

UNITED STATES DISTRICT COURT
*** * (Caption IP 56-C-262) * ***

FINDINGS OF FACT
AND
CONCLUSIONS OF LAW

For a number of years prior to the incorporation of defendant on January 1, 1948, its predecessors were engaged in the manufacture and sale of housewares items. In the year 1937, they commenced experiments in using a high voltage electrostatic field to more efficiently deposit paint coating materials on its manufactured products. Up to this time, they used the conventional process of compressed-air guns without an electrostatic field. These experiments resulted in the development of what they called their No. 1 Process for which United States Patent Number 2,247,963 was issued. The validity and infringement of this patent is not in issue. The No. 1 Process called for the spraying of coating material by means of compressed-air spray guns into an electrostatic field which was maintained between wires or electrodes and through which field the grounded conveyorized articles of manufacture passed, so that the atomized paint forced into the field by compressed-air became electrically charged and was urged toward deposition upon the articles by the effect of the field. The No. 1 Process, as compared with the prior conventional process of spraying paint coating, substantially reduced over-spray, paint loss and labor expense, and it was a substantial improvement in many commercial applications. This process was marketed in the year 1944 and was the first commercially used electro-

static spray painting system. The conventional equipment items such as conveyors, ovens and spray guns were not supplied by defendant or its predecessors but were purchased by their licensees from the plaintiff and other suppliers.

The defendant's predecessors continued their research and development work which resulted in the development of what they called their No. 2 Process and an application for patent was filed on September 29, 1944 for which United States Patent Number 2,685,536 was issued on August 3, 1954. The No. 2 Process made it possible for articles to be coated electrostatically without the necessity of compressed-air spray guns to atomize the coating material. In this process, in substance, the electrostatic field is maintained directly between the atomizing device, or head, and the articles on the conveyor. The liquid coating material is fed at a controlled rate to and distributed along the extended edge of a stationary or rotating atomizing head. The strength of the field at the edge is such that the field is capable of electrostatically atomizing fine, electrically-charged particles from the liquid. The field then disperses those particles in the form of a spray, and deposits them upon grounded articles of manufacture situated on a conveyor moving through and a part of the field. The No. 2 Process, as compared with the No. 1 Process and prior conventional processes of spraying paint coating, in many commercial applications, virtually eliminated over-spray, paint loss, further reduced labor costs, substantially reduced the manufacturer user's investment in spray booths, exhaust systems and related equipment.

While the application for the patent was pending the defendant was incorporated, became the owner thereof, and since has been engaged in the business of marketing systems employing electrostatic forces in the automatic

application of paint or other liquid coating to articles of manufacture carried by conveyors. The first license of the No. 2 Process was granted by defendant in the year 1949, under a special consulting and research agreement with Enameled Steel and Sign Company of Chicago, Illinois. General marketing of the system was commenced in the year 1951. Thereafter the patent on the No. 2 Process issued on August 3, 1954, as United States Letters Patent Number 2,685,536. Inasmuch as the special paint atomizers and accurately controllable paint supply systems required for operation of the No. 2 Process were not available on the market, defendant designed and produced them and furnished them to licensees as part of the specialized equipment.

The plaintiff has been in business since the year 1892, has branch offices or warehouses in twenty-eight (28) major cities in the United States and Canada. It has and is manufacturing and selling spraying equipment for paint and other materials in the Southern District of Indiana. It sells a line of merchandise under the slogan "Everything for Spray Painting," and is one of the two largest merchandisers of spray painting equipment in the United States. It sells, and for many years has sold, a large volume of compressed-air spray guns, for both manual and automatic operation, and in many instances sells complete finishing facilities as a package, including spray guns, spray booths, paint-collecting devices, exhaust systems, and related equipment. In the year 1958, four years after the issuance of defendant's No. 2 Process patent, the plaintiff added its advertised line of products electrostatic spray painting equipment of the compresed-air type as depicted by defendant's No. 1 Process.

The plaintiff's first knowledge of a method for painting by the use of compressed-air and an electrostatic field was

attained in the late 1930's or early 1940's from the No. 1 Process of the defendant's predecessors. In December of 1942, at the invitation of the defendant's predecessors, several of plaintiff's representatives attended a demonstration of the No. 1 Process at Indianapolis, Indiana. Plaintiff's first knowledge of an airless electrostatic painting process was obtained from defendant's No. 2 Process, after it was commercialized. In January of 1951, after discussions of the subject of electrostatic spray painting, the plaintiff purchased a power pack and carried out experiments in that year in keeping with its knowledge of the market development. Plaintiff then engaged in a broad base research to investigate and develop methods of painting other than those being practiced with its products. Its research was sporadic until April 1, 1952, when it hired for that purpose James H. Rice, who began by reviewing all of the patents in the field. In the year 1952, plaintiff negotiated with the co-patentee of the patents in suit and another former research employee of defendant, with the intent to employ them, but no agreement was reached. During the years 1951 and 1952, plaintiff gave consideration to acquiring the business of a third party which was in business of marketing air-type electrostatic spray coating systems in competition with defendant's No. 1 and 2 Processes, but these negotiations terminated. In the year 1953, plaintiff engaged an independent research organization to improve equipment for the application of paint as a coating which was performed in the years 1953 and 1954. The research culminated in the development of an atomizing head, or emitter, called SK661, a drawing of which was made and dated May 12, 1954. The emitter is intended for use in an airless electrostatic coating system which is the subject of the charge of infringement by defendant's counterclaims. After plaintiff learned of the issuance of defendant's No. 2 Process on August 3, 1954, its research

ceased. The plaintiff attempted to market for electrostatic spray painting its SK661 emitter and the equipment related thereto to the Ford Motor Company on January 25, 1956. In response to Ford's request plaintiff unsuccessfully quoted its price with this express provision:

> "This bid shall not be binding upon Binks Manufacturing Company as an offer unless and until Ford Motor Company shall indemnify Binks Manufacturing Company and hold it free and harmless against any and all suits or cause of action which may be brought against Binks Manufacturing Company for infringement and/or contributory infringement of Starkey et al patent 2,685,536 by reason of manufacturing and furnishing Ford Motor Company the devices comprising the subject matter of said bid or by use by Ford Motor Company of said devices."

Thereafter in an exchange of correspondence consisting of eight letters commencing on July 3, 1956, and ending on September 21, 1956, the plaintiff stated it was ready to market a paint sprayer which electrostatically atomized paint without making use of compressed-air spray gun and requested defendant send its standard license form. When defendant sent its No. 2 Process license form without equipment and the alternate license form with equipment, plaintiff sent defendant a print of its SK661 drawing of May 12, 1954, stating that neither form of license was satisfactory, that it was interested in a "license to make and sell equipment for this type of spray painting" under the defendant's No. 2 Process patent; that the license without equipment form was not acceptable because it required continuous periodic payments of royalties based on the extent of the coating material used and that plaintiff's sales practice was such that any license agreements would have to

require the payment of only one royalty payment at the time of each sale so that thereafter plaintiff's customer's use of the equipment would be free of any further royalty payments, and requested defendant consider granting such a license based at a given rate of percentage of the sales price. The defendant responded:

> "• • • Granting licenses on this basis would require a complete change in our marketing policy and a change of all of our licenses now in effect, as otherwise a large part of our licensees would be treated unfairly. We also believe that the system you suggest is not satisfactory for determining the proper value for the use of the process.
>
> "In view of the foregoing we trust you can readily understand why we feel that we cannot comply with your request. We want you to know that licenses are available to your customers for painting with our method and we assume you will not furnish the equipment which has been the subject of this corespondence to such customers unless they are licensed by us."

Twenty (20) days after this exchange of correspondence, the plaintiff commenced its action by the filing of its complaint.

The plaintiff's complaint and amendment thereof sought a declaratory judgment that the defendant's No. 2 Process patent issued August 3, 1954 as United States Letters Patent 2,685,536 entitled "Method for Electrostatically Coating Articles," was invalid, and alleged misuse, violations of the anti-trust law and unfair competition by defendant. Upon the filing of defendant's counterclaim, the plaintiff filed its cross-counterclaim and voluntarily dismissed its amended complaint since the question of justiciable controversy had been rendered moot by the defendant's counter-

claim which was in the form of a conventional patent infringement action. Thereafter, and while the action was pending, on June 4, 1957, United States Letters Patent 2,794,417 issued to the defendant, and was entitled "Apparatus for Electrostatically Coating Articles." The apparatus patent applied for on June 4, 1954 upon which the apparatus patent 2,794,417 issued, was a division of the application of September 29, 1944, on which the method patent 2,685,536 issued. The apparatus patent was then also made a subject of the litigation by the defendant's filing of its supplemental counterclaim and plaintiff's filing of its supplemental cross-counterclaim.

The pleadings having been consolidated by substitution the case was tried upon the issues presented by:

Defendant's substituted counterclaim, seeking injunction and damages on account of alleged infringement by plaintiff of defendant's United States Patent 2,685,536 and plaintiff's substituted answer of three defenses, denial of infringement, invalidity of the method patent and misuse of the patent;

Defendant's substituted supplemental counterclaim seeking injunction and damages on account of alleged infringement by plaintiff of defendant's United States Patent 2,794,417 and plaintiff's substituted answer of five defenses, denial of infringement of the apparatus patent, invalidity of the apparatus patent, two defenses of estoppel to assert the apparatus patent, misuse of the apparatus patent; and

Plaintiff's substituted cross-counterclaim, seeking an injunction, three-fold damages and an accounting for alleged violation of the anti-trust laws and unfair competition by defendant and defendant's substituted answer of two defenses, denying the alleged violation of the anti-trust laws and unfair competition and pleading the two-year

statute of limitations with respect to plaintiff's claim for three-fold damages under Section 15, Title 15, U.S.C.

Patent 2,685,536 in suit is directed to methods of electrostatically spray-painting without the use of compressed-air. It contains eleven claims, all of which, with the exception of claims seven and nine, are asserted by defendant to have been infringed by plaintiff. Claims one, two and ten have been treated as typical.

Patent 2,794,417 in suit is directed to forms of apparatus for use in practicing the method of the other patent 2,685,536. It contains four claims, but only claim four is relied upon by defendant as having been infringed by plaintiff.

Typical of this class of cases; the issues are multiple and the evidence and briefs are voluminous.

The evidence of both parties consisted of exhibits, records, written evidence, admissions, stipulations, interrogatories and depositions. The plaintiff offered no testimony of witnesses in the presence of the Court at the trial. The defendant in addition offered testimony of witnesses in the presence of the Court at the trial who were vigorously cross-examined.

FINDINGS OF FACT

1. Defendant, Ransburg Electro-Coating Corp., is a corporation organized and existing under the laws of the State of Indiana and has its principal office and place of business at Barth and Sanders Streets, Indianapolis 7, Indiana.[1]

2. The plaintiff, Binks Manufacturing Company is a corporation organized and existing under the laws of the State of Delaware and has its principal office and place of business at 3114-40 West Carroll Avenue, Chicago 12, Illinois.[2]

3. The action of the defendant arises under the patent laws of the United States. 35 U.S.C., Section 271, 281, et seq.[3]

4. The amount involved in the controversy presented by plaintiff's cross-counterclaim is in excess of Three Thousand Dollars ($3,000.00), exclusive of interest and costs and its action arises under the anti-trust and anti-monopoly laws of the United States, 15 U.S.C., Section 1, 2, 14 and 15.[4]

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1. Cross-Counterclaim (par. 4), R. I: 31; Answer to Cross-Counterclaim (par. 4), R. I: 41.

2. Cross-Counterclaim (par. 3), R. I: 31; Answer to Cross-Counterclaim (par. 3), R. I: 41; Plaintiff's Admission 1, R. III: 53.

3. Counterclaim (par. 1), R. I: 1; Answer to Counterclaim (par. 1), R. I: 5.

4. Cross-Counterclaim (pars. 1, 2), R. I: 31; Answer to Cross-Counterclaim (pars. 1, 2), R. I: 41.

Defendant's Development of Electrostatic Spray-Painting Methods and Apparatus

5. On August 3, 1954, the defendant was issued United States Letters Patent Number 2,685,536, entitled "Method for Electrostatically Coating Articles," on an application for patent filed on September 29, 1944, in the names of William A. Starkey and Edwin M. Ransburg, which patent is owned by defendant.[5] On June 4, 1957, the defendant was issued United States Letters Patent Number 2,794,417, entitled "Apparatus for Electrostatically Coating Articles" on an application filed June 4, 1954, based upon the aforesaid application filed September 29, 1944, in the names of William A. Starkey and Edwin M. Ransburg, which patent is owned by defendant.[6] The above patents, which relate to the No. 2 Process, are those in suit.[7] The application of June 4, 1954, upon which patent 2,794,417 issued, was a division of the application of September 29, 1944, on which patent 2,685,536 issued.[8]

6. The defendant, since its incorporation on January 1, 1948, has been engaged in the business of marketing systems employing electrostatic forces in the automatic application of paint or other liquid coating to articles of manufacture carried by conveyors.[9] The two coating sytems which it markets are:

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5. Counterclaim (pars. 2, 4), R. I: 1, 3; Answer to Counterclaim (pars. 2, 33), R. I: 5, 16; Cross-Counterclaim (pars. 7, 8), R. I: 32; Answer to Cross-Counterclaim (pars. 7, 8), R. I: 42; Dx. 3, 4, R. II: 1021-35.

6. *Ibid.*

7. *Ibid.*

8. Dx. 4 (Column 1, lines 17-19), R. II: 1033.

9. E. Ransburg Deposition, R. III: 145-46.

(a) The "No. 1 Process," first developed, in which paint sprayed from essentially conventional compressed-air spray guns is electrostatically deposited on the articles;[10] and

(b) The "No. 2-Process," later developed, in which paint atomized under the influence of electrostatic forces without the use of compressed-air is electrostatically deposited on the article.[11]

In addition to its coating systems, defendant markets a "detearing" system, in which electrostatic forces are used to remove the "tears" of excess paint which accumulate on the lower edges of articles previously coated by dipping or flow-coating.[12]

7. Defendant's present business had its origin in an individual proprietorship operated by Harper J. Ransburg, a resident of Indianapolis, Indiana, who was engaged in the manufacture and sale of a variety of houseware items, such as cannister sets, bread boxes and similar accessories.[13] He was assisted in this business by his three sons, Gregg, Harold and Edwin, and in 1941 they formed a partnership, the Harper J. Ransburg Co., which continued to make and sell housewares, but which also commenced the marketing of the detearing process and the

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10. Dx. 7, R. III: 460; Witness Miller, R. I: 251-53, R. III: 73-75; Px. EEEE (pp. 8-9), R. II: 854.

11. Dxs. 17-A, 17-B, 17-C, R. II: 959-61; Px. IIII (pp. 3, 4), R. III: 455-59; Px. UUUU (p. 2), R. III: 389; Witness Miller, R. I: 255-56, 264-67, 268-70, 272-73, R. III: 80-86, 92-93.

12. Miller Deposition, R. III: 62; Px. AAAA, R. II: 1123-33; Px. EEEE (pp. 10-13), R. II: 855-57.

13. Witness H. Ransburg, R. I: 409-10.

No. 1 Process.[14] As of January 1, 1948, with the incorporation of the defendant, the two businesses were separated, the defendant corporation taking over the business of marketing the coating and detearing systems.[15] Defendant is owned by the four Ransburgs, who are its officers and directors.[16]

8. Prior to the development of the Ransburg No. 1 Process, defendant's predecessor had painted many of its products by a widely used system in which a spray of paint formed by and projected from a conventional compressed-air spray gun was directed toward the articles to be painted.[17] Such systems still are widely used in industry.[18] However, when coating is done by means of compressed-air spray guns, much of the material sprayed is not deposited upon the article, but is carried beyond it by the air blast and is lost as "overspray"; and a substantial investment and expense is necessary in installing, maintaining, and operating spray booths, paint collecting devices, and exhaust systems.[19] The Ransburg electrostatic coating systems were devised to reduce the cost of coating by the spray method.[20]

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14. Witness H. Ransburg, R. I: 409-10.

15. Witness H. Ransburg, R. I: 409; Ex. I.I.-2.

16. E. Ransburg Deposition, R. III: 155.

17. Witness H. Ransburg, R. III: 164-65.

18. Plaintiff's Answers to Interrogatories 122, 123, 125, R. III: 49.

19. Witness Miller, R. III: 71-74; Witness H. Ransburg, R. III: 165.

20. Witness H. Ransburg, R. III: 165-66.

9. Commencing in about 1937 the Ransburgs conducted experiments in using a high-voltage electrostatic field to deposit more efficiently upon articles of manufacture coating material atomized by conventional compressed-air spray guns.[21] As the result of this work, they developed their "No. 1 Process," in which the coating material is sprayed by means of compressed-air spray guns into an electrostatic field which is maintained between wires or electrodes and the conveyorized articles of manufacture, so that the paint particles are electrically charged and urged toward deposition upon the articles by the effect of the field.[22] This process substantially reduced over-spray loss and labor expense, and in many commercial applications was a substantial improvement over conventional non-electrostatic painting methods.[23] In 1944 the partnership commenced marketing the No. 1 Process, which was the first commercially-used electrostatic spray painting system.[24]

10. The equipment required by a user of the No. 1 Process includes, in addition to such conventional items as conveyors and ovens (none of which has at any time been supplied by defendant), a voltage source, or power pack, capable of an output in the order of 90,000 volts.[25] At the time when the partnership was ready to license others to use the process, none of the power packs available on the

21. Witness H. Ransburg, R. III: 165-66; E. Ransburg Deposition, R. III: 146.

22. Witness H. Ransburg, R. III: 166-67; Witness Miller, R. III: 121; Px. EEEE (pp. 8-9), R. II: 854.

23. Witness H. Ransburg, R. I: 428-30, R. III: 167-68.

24. Witness H. Ransburg, R. I: 423-29, R. III: 166-67, 204-06.

25. Witness H. Ransburg, R. III: 167-68; Witness Miller, R. I: 294, 299.

market was deemed by it to be sufficiently safe for use in the process, nor were any suitable combined electrical and paint supply controls available.[26] Because of the unavailability of these items on the market, the partnership designed and produced a safer power pack and suitable combined controls, so as to be in position to interest prospective licensees in the process.[27] The agreement licensing the user to use the process provided that Ransburg would furnish on essentially a lease basis the specialized power pack, controls, electrodes, insulating electrode supports, and high-voltage lead-in means.[28] The necessary spray guns and other conventional equipment were not supplied by Ransburg, but were purchased by the licensees from plaintiff and other suppliers.[29]

11. While the No. 1 Process was a definite improvement over non-electrostatic air spray coating, considerable loss of coating material persisted in many applications because the electrostatic field only partially counteracted the tendency of the compressed-air blast to carry much of the material elsewhere than upon the articles being coated.[30] The Ransburg partnership continued its research and development work, and as a result thereof developed its No. 2 Process, by which articles could be coated electrostatically without the necessity of compressed-air spray

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26. Witness Miller, R. I: 336-37, R. III: 64-68, 75-78, 121-22; Witness H. Ransburg, R. III: 167-68, 204-05.

27. *Ibid.*

28. Witness Miller, R. I: 364-65, Px. EEEE (p. 9), R. II: 854; Witness H. Ransburg, R. III: 168-69.

29. Witness Miller, R. III: 68; Witness H. Ransburg, R. I: 410, R. III: 169-70; Roche Deposition, R. III: 240-42.

30. Witness Miller, R. III: 78-79; Witness H. Ransburg, R. III: 170-71.

guns to atomize the material.[31] In this process, in substance, the electrostatic field is maintained directly between the atomizing device, or head, and the articles on the conveyor.[32] The coating material is fed at a controlled rate to and distributed along the extended edge of a stationary or rotating atomizing head.[33] The strength of the field at the edge is such that the field is capable of electrostatically atomizing fine, electrically-charged particles from the liquid.[34] The field then disperses those particles in the form of a spray, and deposits them upon the articles of manufacture.[35] This process, in many applications, virtually eliminates over-spray, and thus paint loss, further reduces labor costs, and substantially reduces the manufacturer's investment in spray booths, exhaust systems, and related equipment.[36] The first license of the No. 2 Process was granted by defendant in 1949, under a special consulting and research agreement with Enameled Steel and Sign Company of Chicago, Illinois.[37] General marketing of the system was commenced in 1951.[38] Inasmuch as the special paint atomizers and accurately controllable paint supply systems required for operation of the No. 2

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31. Witness Miller, R. I: 255-56, R. III: 80-81, 92-93; Witness H. Ransburg, R. III: 170-71.

32. Witness Miller, R. I: 256-57, 264-67, 268-70, 272-74, R. III: 81-92, 92-96, 111-13; Px. IIII (pp. 3, 4), R. III: 455-59; Px. UUUU (p. 2), R. III: 389.

33. *Ibid.*

34. *Ibid.*

35. *Ibid.*

36. Witness Miller, R. III: 96; Witness H. Ransburg, R. I: 430-31, R. III: 171-72.

37. Witness H. Ransburg, R. III: 172-73.

38. Witness Howarth, R. III: 129-30; Witness H. Ransburg, R. III: 171-73.

Process were not available on the market, defendant designed and produced them and furnished them to licensees as part of the specialized equipment.[39]

Plaintiff's Activity in the Art Field of Electrostatic Spray-Painting

12. The plaintiff has for many years and is presently manufacturing and selling spraying equipment for paint and other materials in this District and elsewhere in the United States.[40] With its predecessors, it has been in business since 1892, has branch offices or warehouses in twenty-eight major cities in the United States and Canada, sells a line of merchandise under the slogan "Everything for Spray Painting," and is one of the two largest merchandisers of spray-painting equipment in the United States.[41] It sells, and for many years has sold, a large volume of compressed-air spray guns, for both manual and automatic operation, and in many instances sells complete finishing facilities as a package, including spray guns, spray booths, paint-collecting devices, exhaust systems, and related equipment.[42] In 1958 it added to its advertised line or products electrostatic spray-painting equipment of the compressed-air spray type.[43]

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39. Witness H. Ransburg, R. III: 172-73.

40. Cross-Counterclaim (par. 5), R. I: 31; Answer to Cross-Counterclaim (par. 5), R. I: 41.

41. Plaintiff's Admission 1, R. III: 53; Roche Deposition, R. III: 216-19, 233-35.

42. Plaintiff's Answers to Interrogatories 122, 123, 125, R. III: 49; Roche Deposition, R. III: 209-16.

43. Plaintiff's Answers to Interrogatories 27, 28, R. III: 45-48.

13. Plaintiff's first knowledge of a method for painting by the use of compressed-air and an electrostatic field was attained in the late 1930's or early 1940's from knowledge of the system developed by defendant's predecessor, and in December, 1942, at the invitation of the latter, several of plaintiff's representatives attended a demonstration of the Ransburg air-type No. 1 electrostatic coating system at Indianapolis, Indiana.[44] Plaintiff's first knowledge of an airless electrostatic painting process was obtained from defendant's No. 2 system, after it was commercialized.[45]

14. After discussions of the subject of electrostatic spray painting, plaintiff purchased a power pack in January, 1951, and its personnel first carried out experiments in that year.[46] Its research was sporadic until April, 1952, when it hired for that purpose James H. Rice, who began by reviewing all of the patents in the field.[47] Also in 1952 it negotiated with William A. Starkey, a co-patentee of the patents in suit, and Harry Green, former research employees of defendant, with a view of employing them, but no agreement was reached.[48] During 1951 and 1952 plaintiff gave consideration to acquiring the business of Ashdee Electrostatic Products, Inc., which was in the business of marketing air-type electrostatic spray coating systems in

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44. Plaintiff's substituted Answer to Interrogatory 113, R. III: 49; Plaintiff's Admission 3, R. III: 53; Roche Deposition, R. III: 219, 219-21.

45. Plaintiff's Answer to Interrogatory 114, R. III: 49; Roche Deposition, R. III: 221, 222.

46. Plaintiff's Admission 4, R. III: 53; Plaintiff's Answer to Interrogatory 115, R. III: 49; Roche Deposition, R. III: 232-33.

47. Roche Deposition, R. III: 232-33; Rice Deposition, R. I: 699, R. III: 259-60.

48. Plaintiff's Admission 5, R. III: 53.

competition with the defendant's No. 1 and No. 2 systems, but the negotiations were terminated.[49] In 1953 plaintiff retained Midwest Research Institute, of Kansas City, Missouri, to do research for it on electrostatic spray-painting and to develop a new or improved spraying technique; such research was performed in 1953 and 1954.[50]

15. Plaintiff's efforts culminated in the development of an atomizing head, or emitter, designated SK661, a drawing of which was made and dated on May 12, 1954.[51] This emitter is intended for use in an airless electrostatic coating system which is the subject of the charge of infringement in defendant's counterclaims.[52]

16. After plaintiff learned of the issuance of defendant's Starkey method patent, No. 2,685,536, which was issued on August 3, 1954, its work in the field of airless electrostatic spray-painting became dormant until the negotiations with Ford Motor Company which are hereinafter referred to.[53]

17. The only equipment which plaintiff has attempted to market for the airless electrostatic spray-painting is its SK661 emitter and the equipment related thereto, and the only prospective vendee to which plaintiff has attempted to sell such equipment is the Ford Motor Company.[54] In

49. Plaintiff's Answer to Interrogatory 93, R. III: 48; Roche Deposition, R. III: 227-32, 238.

50. Roche Deposition, R. I: 672-73.

51. Plaintiff's Admission 7, R. III: 53.

52. Dx. 2, Stipulation filed November 7, 1958, R. I: 233-34.

53. Plaintiff's Admission 8, R. III: 53; Roche Deposition, R. III: 239, 248-50; Rice Deposition, R. III: 265.

54. Plaintiff's Admissions 16, 17, R. III: 54.

response to a request by Ford, plaintiff on January 25, 1956, quoted its price upon such equipment with the express proviso:

> "This bid shall not be binding upon Binks Manufacturing Company as an offer unless and until Ford Motor Company shall indemnify Binks Manufacturturing Company and hold it free and harmless against any and all suits or causes of action which may be brought against Binks Manufacturing Co. for infringement and/or contributory infringement of Starkey et al patent 2,685,536 by reason of manufacturing and furnishing to Ford Motor Company the devices comprising the subject matter of said bid or by use by Ford Motor Company of said devices." [55]

Ford did not purchase the equipment.[56]

18. In July, 1956, plaintiff initiated correspondence with defendant, stating that it was "ready to market a paint sprayer which electrostatically atomizes the paint without making use of air," and asking that defendant send its standard license form.[57] When defendant submitted its standard No. 2 Process license forms 439 (with equipment) and 440 (without equipment), plaintiff sent defendant a print of its SK661 drawing of May 12, 1954, said that neither form would be satisfactory, and stated that it was interested in "a license to make and sell equipment for this type of spray painting under your Starkey patent" No. 2,685,536.[58] Plaintiff further advised defendant that

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55. Plaintiff's Admission 18, R. III: 54-55; Px. OOOOO, R. III: 394-95; Px. PPPPP, R. III: 412-13; Roche Deposition, R. I: 676-77, 678-80, R. III: 243.

56. *Ibid.*

57. Px. ZZZZ-1, R. II: 894.

58. Pxs. ZZZZ-2 to -10, inclusive, R. II: 895-903.

form 440 was not acceptable to plaintiff because it required "continuous periodic payments of royalties based on the extent of the coating material used," and that plaintiff's sales practice was "such that any license agreements that we might enter into would have to require the payment of only one royalty at the time of each sale so that thereafter the customer's use of the equipment would be free of any further royalty payments," and asked that defendant consider "granting a license requiring, in the instance of each sale of spray equipment, only a single royalty payment at a given rate of percentage of the sales price."[59] In reply defendant stated in its letter of September 21, 1956:[60]

> "* * * Granting licenses on this basis would require a complete change in our marketing policy and a change of all of our licenses now in effect, as otherwise a large part of our licensees would be treated unfairly. We also believe that the system you suggest is not satisfactory for determining the proper value for the use of the process.
>
> "In view of the foregoing we trust you can readily understand why we feel we cannot comply with your request. We want you to know that licenses are available to your customers for painting with our method and we assume you will not furnish the equipment which has been the subject of this correspondence to such customers unless they are licensed by us."

Thereafter, on October 11, 1956, plaintiff filed the complaint in this cause, seeking a declaratory judgment that

59. Px. ZZZZ-12, R. II: 910.

60. Px. ZZZZ-13, R. II: 911-12.

the Starkey process patent was invalid and alleging misuse of the patent, anti-trust law violations, and unfair competition by defendant.[61]

Nature of the Patents in Issue and Their Position in the Art

19. In the No. 1 Process,[62] which defendant's predecessor had developed in the late 1930's,[63] articles to be spray-painted were conveyed past an electrode.[64] The articles were grounded, while an electrical potential on the order of 90,000 volts[65] was applied to the electrode to create an electrostatic field between it and the articles moving past it.[66] A paint spray formed outside that field by conventional compressed-air spray guns was directed into the field with the result that the sprayed particles acquired electrical charges which caused them to be attracted to the articles.[67] While this system reduced losses of paint as compared with the older non-electrostatic spray-painting systems, the air employed to form the spray and project it into the field had to escape from the coating zone and carried away with it a substantial portion of the paint sprayed.[68] Spray booths and other equipment were still necessary to handle the paint escaping as overspray from

61. Plaintiff's original Complaint herein.

62. Dx. 7, R. III: 460.

63. Witness Miller, R. III: 63.

64. Witness Miller, R. I: 251-52.

65. Witness Miller, R. I: 298-99.

66. Witness Miller, R. I: 253-54.

67. Witness Miller, R. I: 252-53.

68. *Cf.* Witness Miller, R. III: 71-72, 78-79.

the coating zone.[69] Even with the benefit of electrostatic forces, paint losses in this method of spray painting may amount to as much as about one-third of the paint sprayed.[70]

20. The systems[71] illustrated in the patents in suit eliminated the air streams which caused substantial paint losses even in the No. 1 Process.[72] In each of such systems, the paint is supplied to and oozes at a controlled rate from the inside to the outside of an atomizer[73] which is maintained at an electrical potential corresponding to that impressed on the electrode in the above-described No. 1 system.[74] The articles to be coated are conveyed past such atomizer and are maintained at ground potential[75] to create an electrostatic field between them and the paint fed from the interior of the atomizer.[76] Such paint is atomized electrostatically into a spray of finely-divided, electrically-charged particles which are electrostatically deposited on the articles.[77] These systems, which exemplify the "No. 2 Process," employ no air for atomizing the paint or forming the spray,[78] reduce paint losses to 1% or 2% of the paint

69. Witness Miller, R. III: 79.
70. Witness Miller, R. III: 79.
71. Dxs. 8-A, 8-B, R. III: 279-80.
72. Witness Miller, R. III: 92-93.
73. Witness Miller, R. III: 82-83, 87-88.
74. Witness Miller, R. III: 106.
75. Witness Miller, R. III: 81-82.
76. Witness Miller, R. III: 82-83.
77. Witness Miller, R. III: 84-86.
78. Witness Miller, R. III: 92-93.

sprayed,[79] and can be practiced in the open shop without the necessity for expensive paint exhaust and overspray recovery equipment.[80]

21. All forms of atomizers shown in the two patents in suit provide for electrostatic atomization of the paint at individual points of a series of points disposed in a row.[81] In the form of atomizer shown in Figs. 5 and 6 of the patents in suit, the paint oozes through orifices in the head and forms a continuous film which is supported by a row of needles projecting downwardly from the head and which bridges the spaces between the spaced points where the atomization occurs.[82]

22. Patent 2,685,536 in suit is directed to methods of electrostatically spray painting without the use of air.[83] It contains eleven claims, all of which, with the exception of Claims 7 and 9, are asserted by defendant to have been infringed by plaintiff. Claims 1, 2, and 10 have been treated as typical.[84]

23. Patent 2,794,417 in suit is directed to forms of apparatus for use in practicing the method of the other patent.[85] It contains four claims, but only Claim 4 is relied upon by defendant as having been infringed by plaintiff.[86]

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79. Witness Miller, R. III: 96-97.

80. Witness Miller, R. III: 107-08.

81. Dxs. 8-A, 8-B, R. III: 279-80.

82. Dx. 10-D, R. II: 958; Witness Miller, R. I: 261-262, 301.

83. Dx. 3, R. II: 1021-28.

84. Dx. 3, R. II: 1021-28; Tr. 15, R. III: 436.

85. Dx. 4, R. II: 1029-35.

86. Dx. 4, R. II: 1029-35: Tr. 15, R. III: 436.

24. The original application Serial No. 556,390, filed September 29, 1944, which resulted directly in patent No. 2,685,536 and indirectly in patent No. 2,794,417, had extended prosecution and careful consideration in the hands of the Examiner and Board of Appeals of the Patent Office.[87] A total of 22 references were cited against it, and it was twice considered by the Patent Office Board of Appeals before being allowed.[88] Included in the prior art cited against it were references[89] showing the electrostatic deposition of paint and other particles suspended in air streams and at least one reference showing the electrostatic atomization of liquids.[90]

25. Any spray-painting operation requires that the paint be atomized at an adequate rate, that the atomized particles be formed into a spray of suitable shape and size, and that the spray particles be small enough to avoid creating a rough finish and large enough that their volatile constituents will not evaporate to such an extent that the deposited particles are too dry.[91] The method of patent 2,685,536 in suit meets those requirements and has been widely used in industry to paint a variety of types of articles including automobile chassis and shock absorbers, light fixtures, furniture frames, and cabinets for domestic refrigerators and laundry appliances.[92]

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87. See File Wrappers, Dxs. 5-A, 5-B which were transmitted by the Court of Appeals to this Court pursuant to a motion by Petitioner under Rule 22, proof of service dated August 30, 1960.

88. See File Wrappers, Dxs. 5-A, 5-B (pp. 252, 393).

89. Such as Pugh patent (1,855,869), R. II: 1073, and Meston patent (2,097,233), R. III: 467.

90. Darrah patent (1,958,406), R. II: 1081.

91. Witness Miller, R. I: 250, R. III: 68-71.

92. Pxs. UUUU, R. II: 877.

Prior Art

* * * *

40. Method patent 2,685,536 in suit is for a broad, basic invention fundamentally different from any previous spray-coating process of record here.[147] The subject matter defined by each of its claims 1 to 6, 8, 10 and 11 in suit, is novel and involves invention over anything disclosed in the prior art.

41. Claim 4 of apparatus patent 2,794,417[148] in suit describes electrostatic spray coating apparatus wherein there is maintained between an atomizer and the work an electrostatic field capable of atomizing the liquid-coating material and depositing the atomized particles on the work. An important feature of the claim is means for distributing the unatomized coating material to a plurality of points of atomization so close together that the liquid bridges the spaces between them. Such a feature, which promotes uniformity in the distribution of liquid to the several points where atomization takes place, is inherent in Figs. 5 and 6 of the patents in suit,[149] is novel,[150] and involves invention over the prior art.

42. The subject matter defined by the claims of the patents in suit has filled a long-felt want, and methods and apparatus embodying such subject matter have found wide use in industry.[151] Hundreds of companies, including some

147. Entire record.

148. Dx. 4, R. II: 1029-35.

149. Witness Stellman, R. III: 144; Dx. 10-D, R. II: 958.

150. Entire Record.

151. See Defendant's Answer to Interrogatory 35(a) and list of licensees there referred to, R. I: 50, 152-77.

of the largest in the country,[152] have paid the defendant substantial fees for the right to use such subject matter.[153] While the specific atomizers used in defendant's commercial spray coating systems differ in detail from the specific atomizers shown in the patents in suit, the commercial systems all embody the fundamental concepts to which the claims in suit are directed,[154] and the commercial success the systems have enjoyed is to be credited basically to the inventions those claims describe.

Other Issues of Validity

* * *

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45. The two patents in suit are for inventions different from each other.[160] While the contemplated operation of apparatus patent 2,794,417 inherently involves the method claimed in patent 2,685,536, that method can be practiced by forms of apparatus[161] outside the scope of claim 4 of patent 2,794,417.

* * *

152. Witness Howarth, R. III: 130.

153. Witness Howarth, R. III: 130.

154. Witness Miller, with reference to Dxs. 17-A, 17-B, 17-C, R. I: 264-75, R. II: 959-61, R. III: 107-10.

160. *Prima facie* validity (35 U. S. C. 282) and absence of countervailing evidence.

161. *E.g.* The apparatus of Figs. 1-4 of the patents in suit, R. II: 1021-29; *cf.* Witness Miller, R. I: 289, 300-01.

Alleged Misuse of the Patents in Suit
(Fourth Defense to Supplemental)

60. Defendant has employed essentially the same marketing system and licensing practices from the time of its organization to the present.[206] It seeks to interest prospects in its coating system by advertising in trade publications, by the distribution of sales brochures, and by direct solicitation, in all of which it refers to its systems as the No. 1 and No. 2 "process."[207] If a prospect expresses interest, defendant obtains from him data on his product, his coating material, the type and thickness of finish desired, his paint "mileage" (finished units per gallon) under existing procedures, his conveyor, and other relevant factors, and invites him to submit samples of his products for a laboratory test.[208]

61. The electrostatic spray coating needs of defendant's prospective customers vary substantially, depending upon the nature and size of the article to be coated, the coating material to be used, the type of finish desired, and other production considerations.[209] In defendant's laboratory a painting operation is designed, set up, and operated for the prospect without obligation, employing his products and coating material and simulating the conditions existing or contemplated in his plant.[210] From this pilot operation, anticipated coating material savings are

206. Witness H. Ransburg, R. I: 410.

207. Witness H. Ransburg, R. I: 410-11, R. III: 173-75.

208. Witness H. Ransburg, R. III: 174-75; Miller Deposition, R. III: 60-61; Howarth Deposition, R. I: 571-74.

209. Witness H. Ransburg, R. III: 176-77.

210. Witness H. Ransburg, R. III: 175-77; Miller Deposition, R. III: 60-61; Howarth Deposition, R. III: 124-26.

computed and the application and quality of the finish are demonstrated to the prospect.[211] If the prospect remains interested, defendant's engineers then make a drawing of the system and apparatus arrangement demonstrated to and desired by the prospect, and a proposed agreement is submitted to him on one of defendant's standard printed agreement forms.[212]

62. The agreement licenses the customer, or user, to use the particular system shown schematically in the identified engineer's drawing for the purpose of coating the articles specified, and is terminable by the user at any time upon a thirty-day notice, and by the defendant at any time after three years upon a six month notice.[213] Under the terms of the agreement, when desired by the prospective customer, defendant furnishes, on essentially a lease basis, the specialized equipment necessary for the operation of the system designed for him, sends its engineer to supervise installation in the user's plant, and undertakes to replace parts which become defective.[214]

As consideration for the foregoing, a licensee of the No. 2 Process pays: (a) an initial fee which varies with the design of the system and apparatus licensed, and (b) monthly fees representing a portion of the user's savings resulting from the use of the system.[215] The size, shape, and contour of the article to be coated determine the quan-

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211. Witness H. Ransburg, R. III: 177.

212. Witness H. Ransburg, R. III: 177-78.

213. Defendant's Answer to Interrogatory 8 (Exs. D-21, D-36 thereto), R. III: 37-41, R. III: 431.

214. *Ibid.*

215. Howarth Deposition, R. I: 575; Miller Deposition, R. III: 61.

tity of paint which can be saved through use of the system, and defendant has classified articles of manufacture on this basis.[216] The monthly fee is computed as a percentage of the cost of the coating material used in the system by the user, which percentage depends upon the class into which the article falls and is in proportion to the potential paint saving in coating that article.[217] In practice, this formula, as applied to each individual user, results in his paying for the use of the system compensation related to the actual benefit to that user in his particular operation, subject to a specified minimum.[218]

The initial fee of a No. 1 Process licensee varies with the number of air-spray guns which are to be used, and the monthly fee consists of a fixed minimum amount, plus a percentage of the cost of the coating material used in the system by the user, which percentage is uniform for all users and decreases as the quantity of material used increases.[219]

63. In the event any prospective user would not desire that defendant furnish the specialized equipment, installation supervision and parts replacement service, but would desire a license under defendant's applicable patents to use one of the aforesaid systems, defendant will grant such non-equipment license by means of a different standard printed form agreement, in consideration of substantially lower initial and monthly fees.[220]

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216. *Ibid.*

217. E. Ransburg Deposition, R. III: 151-54, R. II: 753-55; Miller Deposition, R. III: 61.

218. *Ibid.*

219. Px. NN, R. II: 753-55.

220. Witness H. Ransburg, R. III: 178-79, 181-85, 207-08; Px. JJJ-2, R. II: 816-18; Px. NN, R. II: 753-55; Dxs. 23, 24, 26, 27, 28, 29, R. III: 282-349; Defendant's Answer to Interrogatory 8 (Exs. D-22, D-38 thereto), R. III: 15-17, 42-44.

64. Satisfactory performance of defendant's systems depends upon the character and quality of the specialized equipment incorporated therein.[221] Defendant recommends its systems and enters into license agreements only where its analysis shows that the system will perform satisfactorily for the licensee, effect significant savings, and reflect credit upon the process.[222] Where the license agreement requires defendant to furnish such equipment, supervise its installation, and replace defective parts, defendant, as a matter of standard business policy, guarantees to the user that the system will coat the user's articles to his satisfaction, and will permit the user to terminate the agreement with refund of fees if the system does not do so.[223]

65. Although much of the specialized equipment required for the practice of defendant's processes was and is not available on the open market and defendant has produced the same and furnished it to its licensees in order to be able to market its processes, it has always been the express policy of the defendant, and so understood by all of its officers and sales and management personnel, that if a prospective licensee preferred to obtain equipment elsewhere than from defendant, he was free to do so and at reduced fees could obtain a license from defendant without equipment, installation supervision, or part-replacement service.[224] This policy was expressed to all distrib-

221. Witness H. Ransburg, R. III: 178-80.

222. Witness H. Ransburg, R. III: 179-80; E. Ransburg Deposition, R. III: 154-55.

223. Witness H. Ransburg, R. I: 411-12, 419-21; Howarth Deposition, R. III: 126-28.

224 Witness H. Ransburg, R. I: 463-64, R. III: 178-79, 180-84, 184-85, 185-88; Dxs. 23, 24, 26, 27, 28, 29, R. III: 282-349; Px. NN, R. II: 753-55; Px. JJJ-2, R. II: 816-18; H. Ransburg Deposition, R. I: 542-43; Pleva Deposition, R. I: 615-17, R. III: 267-68; Witness E. Ransburg, R. III: 159.

utors and salesmen in a bulletin issued by the Ransburg partnership on August 29, 1947, and has been reiterated by defendant in bulletins of August 18, 1950; May 27, 1953; July 15, 1953; May 13, 1954; April 4, 1955; and June 6, 1956.[225] Although no prospect of defendant had ever expressed interest in a license without equipment, in 1953 it prepared and stocked standard printed contract forms for licenses without equipment as to each process; instructed its sales personnel to advise all prospective customers that non-equipment licenses were available; and informed its existing licensees by letter that should they desire to return defendant's equipment and retain only a license, their monthly fees would be reduced by stated amounts.[226] Those licensees with whom agreements had been consummated, but who had not yet paid the initial fee, were informed that the initial fee would also be reduced by a stated amount.[227] Again on May 13, 1954, salesmen were reminded by bulletin to advise all prospective customers that they could obtain a license without equipment for reduced initial and monthly fees.[228] Since 1953 defendant's sales brochures describing the No. 2 Process have stated that defendant will supply the equipment "when desired," and are handed or mailed to virtually every prospect and distributed at defendant's display at trade shows at the rate of approximately 10,000 copies

225. *Ibid.*

226. Dx. 26, R. III: 284-312; Px. JJJ-2, R. II: 816-18; Defendant's Answer to Interrogatory 8 (Exs. D-11, D-30 thereto), R. III: 1-5, 18-23; Witness E. Ransburg, R. III: 156-57; Px. S, R. II: 730; Pxs. Z-1 to -7, inclusive, R. II: 731; Px. LLL-2, R. II: 824; Pleva Deposition, R. III: 268-69; H. Ransburg Deposition, R. I: 540-41, 542-43.

227. Witness E. Ransburg, R. III: 156-59; Dxs. 34 to 40, inclusive, R. III: 355-61.

228. Witness H. Ransburg, R. III: 186; Dx. 27, R. III: 313-14.

per year.[229] When proposed agreements providing for equipment are transmitted to the prospect, the letter points out that the agreement so provides, and states that defendant understands that the prospect prefers this contract to one under which the equipment is not furnished.[230] Defendant thus takes steps to inform its prospects in writing of the availability of process licenses without equipment upon the initial contract, and again when transmitting the proposed agreement for execution.[231]

66. The defendant has never at any time required that any person desiring a license under either of the patents in suit, or any of its other patents, must obtain from it, or pay for, equipment, installation supervision, or part-replacement service as a condition to the granting of the license.[232] No prospective licensee has requested a license to practice the process without defendant's furnishing equipment, or that any such prospective licensee has been refused such a license.[233]

67. As of the filing of this cause, defendant has granted 733 electrostatic coating licenses, of which 463 were still in force and effect.[234] Defendant has been required to

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229. Witness H. Ransburg, R. I: 423-24, R. III: 174, 189-90; Px. UUUU (p. 15), R. II: 880; Px. VVVVV-1 (p. 14), R. III: 429; Houlberg Deposition, R. III: 272-73; Rothe Deposition, R. III: 274-76.

230. Witness H. Ransburg, R. III: 190-91; Pxs. BB-1 to -5, inclusive, R. II: 732; Px. LLL-3, R. II: 825.

231. See footnotes 229 and 230 above.

232. Entire record.

233. Witness H. Ransburg, R. III: 191; Witness E. Ransburg, R. III: 159; entire record.

234. Defendant's Answer to Interrogatory 3, R. I: 46; Witness H. Ransburg, R. I: 476-77.

furnish equipment by all agreements licensing air-type systems except (a) the license to Hillgren Manufacturing Company, Huntington Park, California, granted as part of the settlement of defendant's suit against Hillgren for patent infringement, and licensing the use of defendant's process with infringing equipment previously acquired elsewhere by Hillgren,[235] and (b) a few agreements whereby existing licensees who had defendant's equipment under a prior agreement were granted licenses to use the process for additional or extended purposes by means of equipment procured by themselves and connected by them to defendant's previously-furnished power pack.[236] All No. 2 Process license agreements have included equipment.[237]

Because of the desire of the prospective licensees to have a satisfactory working system, which will perform as demonstrated in defendant's laboratory, the licensees prefer to have defendant supply the equipment.[238] The evidence shows that 55 of defendant's licensees who received the 1953 letter advising that they could have a non-equipment license if they so preferred, subsequently executed 97 agreements for additional licenses and in every case chose an agreement requiring defendant to furnish the equipment.[239] No licensee of the defendant, at the time the license agreement was consummated, did not prefer an agreement under which defendant would furnish

235. Witness H. Ransburg, R. III: 191-92; Dx. 30, R. III: 349-54.

236. Witness H. Ransburg, R. III: 191-92.

237. Witness H. Ransburg, R. III: 192.

238. Roche Deposition, R. III: 247; Pleva Deposition, R. I: 619-21; Houlberg Deposition, R. I: 633, R. III: 270; Rothe Deposition, R. I: 636, R. III: 276.

239. Witness E. Ransburg, R. III: 159-60.

equipment to one under which it would not.[240] Nor has any licensee been in any manner coerced into taking undesired equipment, installation supervision, or part-replacement service as a condition to the grant of a license.[241]

68. The equipment supplied by defendant to its licensees consists of the minimum specialized equipment needed for use of the particular systems licensed.[242] The equipment, as a whole or combination, has no other substantial use.[243]

69. Defendant does not sell equipment outright.[244] It has never licensed anyone under its United States patents to make and sell electrostatic spray-coating systems.[245]

70. No terms for licenses with or without equipment are quoted by defendant to prospective licensees unless such prospects express interest therein or request quotations.[246] No prospective licensee ever expressed interest in, or requested, quotations on a No. 2 Process non-equipment license prior to defendant's quotation of March 23, 1954 to Webster-Chicago Corporation.[247]

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240. Entire record.

241. Entire record.

242. Witness H. Ransburg, R. I: 424-25; Px. EEEE, R. II: 847-60; Px. IIII, R. II: 861-62, R. III: 455-59; Px. UUUU, R. II: 877-80, R. III: 389.

243. Witness H. Ransburg, R. III: 193-94.

244. Defendant's Admission 1, R. I: 194; Witness H. Ransburg, R. I: 478-79.

245. Defendant's Admission 5, R. I: 194.

246. Witness H. Ransburg, R. III: 194-95.

247. Px. LLL-1, R. II: 822-24.

Thus, the terms upon which defendant would have quoted a No. 2 Process non-equipment license, had a request therefor been made, were academic until 1954. However, the pricing schedule established by defendant in 1953 and 1954 included rates for non-equipment licenses.[248] The initial fee for a license with equipment ranged from $8,100 to $12,500 per unit, depending upon the type and complexity of the system designed; whereas a non-equipment license was available for an initial fee of $4,100.[249] The minimum monthly fee without equipment was correspondingly less than if equipment were furnished.[250] Whenever any prospective licensee requested quotation of non-equipment license terms, or showed interest in them, defendant quoted such terms.[251] Any terms quoted to any prospect for a non-equipment license made due and proper allowance for elimination of the equipment and related services not to be furnished thereunder.[252]

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Alleged Package Licensing

71. Defendant's license agreement forms do not identify the specific patents under which the user is licensed, but grant a right or license to use an ~~unidentified~~ process (with or without compressed-air) to coat particular items in accordance with the specially designed system shown in the identified drawing.[253] The defendant has never

248. Ex. JJJ-2, R. II: 816-18; Dx. 27, R. III: 313-14.

249. Px. III-1, R. II: 809-10; Dx. 27, R. III: 313-14.

250. Px. JJJ-2, R. II: 816-18.

251. Witness H. Ransburg, R. III: 192-93; Px. LLL-1, R. II: 822-24; Pleva Deposition, R. I: 617.

252. Entire record.

253. Defendant's Answer to Interrogatory 8 (Exs. D-1 to -38, inclusive), R. I: 114-51, R. III: 1-44, 431-35.

required any prospective licensee, as a condition to receiving a license under any patent, to take or pay for any license under any patent which did not apply to the system described in the license agreement.[254] No prospective licensee has ever requested a license under any of defendant's patents which defendant has refused to grant such license unless such prospective licensee also takes or pays for a license under one or more other patents.[255] No licensee of defendant has at any time received or paid for a license under any patent which did not apply to the system described in the license agreement.[256]

Alleged Violation by Defendant of the Anti-Trust Laws and Unfair Competition

72. On April 7, 1943, the Ransburg partnership purchased from Western Electric Company, Incorporated, the Pugh patent 1,855,869, subject to a license reserved to Western Electric and Bell System companies, which patent had not been, and was not then being, used in the seller's manufacturing operations.[257] This patent, which expired on April 26, 1949, was for a method of and apparatus for coating articles, wherein articles on a conveyor passed through a closed chamber, into which a compressed-air atomized spray of coating material was introduced, the spray nozzle and articles being connected to a source of electrical energy of high potential, giving the sprayed particles a charge opposite that of the articles and attracting

254. Entire record.

255. Witness H. Ransburg, R. III: 194-95; entire record.

256. Entire record.

257. Px. SS, R. II: 762-64; Px. SSSS (Letter of April 25, 1941, par. 1, second sentence) R. III: 387; H. Ransburg Deposition, R. III: 162-63.

them to the uncoated portions of the articles.[258] The partners deemed it advisable, if not necessary, on advice of counsel, to acquire this patent or a license under it in order to permit them to proceed with their development of their air-type No. 1 Process and to market it free from danger of possible infringement charges; and they purchased the patent for $5,000, and the defendant retained it until its expiration, with that purpose and intent.[259]

73. In settlement of interference proceedings No. 80,369 in the United States Patent Office between patent applications of Harold P. Ransburg, Serial No. 366,529, and Charles K. Gravley, Serial No. 313,914, the Ransburg partnership entered into an agreement of May 3, 1943, with the Brush Development Company, Cleveland, Ohio, under the terms of which, for cash and other consideration, Brush sold to Ransburg the Gravely application, upon which United States patent No. 2,359,476 issued on October 3, 1944.[260] This patent is upon an electrostatic method and apparatus for removing excess coating material from articles previously coated by dipping.[261] Its acquisition by the partnership and retention by the defendant did not damage the plaintiff, who has at no time attempted to market detearing devices.[262]

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258. Px. T, R. II: 1073-80; Plaintiff's Admission 23(b), R. III: 55.

259. Witness H. Ransburg, R. III: 194-96; Px. SSSS, R. III: 387-88; E. Ransburg Deposition, R. III: 154.

260. Px. TT, R. II: 765-70; Witness H. Ransburg, R. I: 455-58.

261. Px. GGGGG, patent 2,359,476, R. II: 1113-21.

262. Entire record.

74. When the Ransburg partnership was in the initial stages of marketing its air-type No. 1 Process, it received from Behr-Manning Corporation, Troy, New York, a leading manufacturer of sandpaper and abrasives, a written notice dated November 22, 1940, stating that some of the latter's patent coverage was directed to the art of "electrodeposition of paint or other liquids," and suggesting a meeting to discuss the matter.[263] Behr-Manning's patents pertained primarily to the manufacture of abrasives and flock-coated articles.[264] However, after the parties had engaged in some discussions, the Smyser patent 1,788,600, which was issued originally on January 13, 1931, upon a method for electrostatically making abrasive articles and apparatus therefor, was reissued on January 11, 1944 (Re. 22,419), with claims extending to the electrostatic coating of articles as practiced by the Ransburg partnership.[265] Two of such claims were identical to claims originally issued in the Pugh patent, and might conceivably have been asserted against the Ransburgs and their air-type No. 1 Process customers.[266] Behr-Manning owned the rights to said Smyser reissue patent.[267] The Ransburg partners were concerned about these obstacles to their development and marketing, as expressed in their letter to Behr-Manning of July 3, 1944, as follows:[268]

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263. Witness H. Ransburg, R. III: 197; Px. PPPP (letter of November 22, 1940), R. II: 862-63.

264. *E.g.*, Smyzer Re. 22, 419, R. II: 1039-47.

264. *E.g.*, Smyzer Re. 22,419, R. II: 1039-47.

265. Px. PPPP, R. II: 862-76a, R. III: 378-85; Px. U, R. II: 1037-47.

266. Witness H. Ransburg, R. I: 434-35; Px. PPPP (telegram of August 10, 1944), R. II: 869.

267. Px. PPPP (letter of May 20, 1941), R. II: 865-66.

268. Witness H. Ransburg, R. I: 437-39, 485-86, R. III: 197-98, 199; Px. PPPP, R. II: 862-76a, R. III: 378-85.

"Notwithstanding the wide separation of the fields in which we have been operating, it is easily possible that certain aspects of our patent protection might well overlap, particularly in view of the present Pugh status.

"It seems that we mutually can expect every advantage from resuming the discussion to some mutually satisfactory conclusion so that each of us may aggressively pursue our endeavors without concern."

After further negotiations, the parties entered into an agreement as of September 26, 1944, whereby Ransburg granted to Behr-Manning an exclusive royalty-free license with right to sub-license under Ransburg's listed patents and applications, limited in substance to abrasive, flock-coated, and fiber-coated articles; and Behr-Manning granted to Ransburg a similar license under the listed Behr-Manning patents and applications, for use in "electrostatic propulsion, dispersion, orientation, deposition," etc., of liquid particles, except as to the aforesaid abrasive, flock-coated, and fiber-coated articles.[269] Such patent rights as the Ransburg partnership received pursuant to this agreement were not directed to airless electrostatic spray painting or coating, and no rights were granted by Ransburg to Behr-Manning under the Starkey, et al, application of September 29, 1944, which resulted in the patents here in suit.[270] On January 1, 1948, defendant succeeded to the rights of the partnership under the agreement.[271] Said Smyser reissue patent expired on January 13, 1948.[272]

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269. Px. UU, R. II: 771-78.

270. Px. UU, R. II: 771-78.

271. E. Ransburg Deposition, R. III: 145-46.

272. Px. U, R. II: 1037-47.

75. Prior to the execution of said agreement of September 26, 1944, Behr-Manning was not engaged in the business of marketing electrostatic spray-painting systems of either the air or airless type; had done no development work in that field; and in fact was excluded therefrom by the Harold P. Ransburg, et al. patents 2,247,963 and 2,334,648, and by Pugh patent 1,855,869.[273] Neither has defendant or its predecessor at any time made or marketed abrasives or flock-coated articles.[274] The agreement, having been executed at a time when Behr-Manning was already excluded from said field by Ransburg's patents, did not as a matter of fact exclude or remove Behr-Manning from said field as an existing or potential competitor of Ransburg.[275] After the execution of the agreement, defendant received two inquiries as to the use of electrostatic processes for manufacture of abrasive, flock, or fiber products, and in each instance the inquirer was informed that defendant's interest was in the painting field and that perhaps Behr-Manning could assist the inquirer.[276] There is no evidence of any agreement, understanding, or arrangement between Behr-Manning and defendant, except as set forth in said written agreement.[277] The sole intent and purpose of the partnership in executing said agreement, and of defendant in succeeding to it, was to permit the marketing of its air-type No. 1 Process free from the possible risk of claims or suits for infringement of the

273. Witness H. Ransburg, R. I: 440-41, R. III: 198, 206-07; Dx. 16, R. II: 1095-1103; Px. HHHHHH (patent 2,334,648), R. III: 489; Px. T, R. II: 1073-80.

274. Witness H. Ransburg, R. III: 198-99.

275. See references note 273, *supra*; Px. UU, R. II: 771-78.

276. Defendant's Answers to Interrogatories 82-83, R. I: 57-58; Defendant's Admissions 81, 82, R. I: 206-08.

277. Entire record.

listed Behr-Manning patents.[278] The agreement in no way prohibited either party from later entering the field theretofore engaged in by the other, except insofar as the patents which were the subject of the agreement would have prevented such entry.[279]

76. Among the patents under which the Behr-Manning agreement purported to give the Ransburg partnership a license were Wintermute patent 2,221,338 and Meston patent 2,097,233.[280] After the execution of the agreement, in marketing its No. 1 Process, the partnership gave assurances to some of its prospective licensees that it had an exclusive license under said patents, and license agreements were thereafter consummated.[281] In early 1948, defendant learned that, at the time of the execution of the agreement with Behr-Manning, the latter did not in fact have the right to grant Ransburg a license under said two patents, and that such right was owned by Research Corporation.[282] Thereafter on October 7, 1948, defendant executed an agreement with Research Corporation whereby, in consideration of the payment of royalties, defendant obtained an exclusive license under said two patents, with the proviso that, at any time after June 30, 1951, either party could convert the license to a non-exclusive one.[283] By written notice dated May 26, 1954, defendant

278. Witness H. Ransburg, R. III: 197-200; H. Ransburg Deposition, R. III: 163-64.

279. Px. UU, R. II: 771-78.

280. Witness H. Ransburg, R. III: 200-01, 204; Px. UU, R. II: 771-78.

281. Witness H. Ransburg, R. III: 200-01.

282. Witness H. Ransburg, R. 1: 484, R. III: 200-01.

283. Px. VV, R. II: 779-90.

exercised this right and so converted the license.[284] The Meston patent expired on October 26, 1954, and the Wintermute patent expired on November 12, 1957.[285] The intent and purpose of defendant in executing said agreement was to protect itself and its licensees against the possible risk of claims or suits for infringement of said patents.[286]

77.[287] The only patent related to the airless No. 2 Process which defendant has acquired from any person other than its own personnel is Simmons patent 2,808,343, which was assigned to defendant on March 5, 1952, by C. C. Simmons, President of Enameled Steel & Sign Company, Chicago, Illinois, pursuant to the terms of a pre-existing agreement between defendant and said company dated March 21, 1949. Approximately two years before defendant commenced the general marketing of its No. 2 Process, it entered into an arrangement with the above company whereunder defendant disclosed confidential engineering and development data on the process and Simmons' company performed research and development work with the process for defendant essentially as a consultant during the course of which it used the process in its own commercial coating of acoustical pans. As a part of this arrangement, the parties entered into the aforesaid written agreement, terminable upon thirty days' notice by either party at any time, licensing Simmons' company, upon favorable terms, to use the process, and providing that the user would treat all information relating to the process

284. Plaintiff's Admission 27, R. III: 56-57; Px. QQQQ, R. III: 386.

285. Plaintiff's Admissions 25(b), 26(b), R. III: 56.

286. Witness H. Ransburg, R. III: 200-01.

287. Since Petitioner has raised no questions on the subject matter of this finding, no record references are cited in support thereof.

as secret and confidential; would disclose to defendant all techniques, knowledge, and information relating to inventions or improvements upon electrostatic coating processes or apparatus; and would assign to defendant any inventions, improvements, or letters patent relating thereto.

78. None of the aforesaid agreements pursuant to which defendant acquired patents or patent rights was entered into by defendant or its predecessor with the purpose or intent of restricting entry of competitors into the field of electrostatic spray-coating equipment, or of coercing the trade into dealing with defendant, and there is no evidence that any of them had such effect.[288]

79. Plaintiff has at no time attempted to secure from anyone a license under any of the patents assigned or licensed to defendant pursuant to any of the aforesaid agreements, nor did plaintiff know of the existence of any of said agreements until after the commencement of this action and discovery depositions herein.[289] None of said agreements, or any right acquired by defendant thereunder, affected plaintiff in any way.[290]

80. Except for replacing defective parts, defendant does not contract to service or maintain the equipment used by its licensees and the licensees are free to perform such service and maintenance themselves, or obtain them from any source they desire.[291] Plaintiff has at no time at-

288. Entire record.

289. Plaintiff's Admissions 22, 23(c) and (d), 24(b), 25(c) and (d), 26(c), 26(d), 29, 30, 31, 32, R. III: 55-57; Plaintiff's Answers to Interrogatories 195, 196, 198, 199, 201, 202, 204, 205, R. III: 51-52.

290. Entire record.

291. Defendant's Answer to Interrogatory 8 (Exs. D-21, D-36 thereto), R. III: 37-41, 431-35.

tempted to engage in the business of servicing electrostatic spray-coating equipment or dealing in used equipment or in replacement parts.[292]

81. Defendant has no monopoly in the marketing of compressed-air electrostatic spray-coating systems.[293] Such systems are, or have been marketed in competition with its No. 1 and No. 2 Processes by the following, some of whom have been so engaged since 1950 or 1951.[294]

Ashdee Electrostatic Products, Inc.
Homewood, Illinois

Scientific Electric Co.
Garfield, New Jersey

Ionic Electrostatic Corp.
Garfield, New Jersey

H. G. Fischer Co.
Franklin Park, Illinois

Staticote Systems, Inc.
Chicago, Illinois

Plaintiff felt that it was free to enter this field at any time, but chose not to do so until 1958.[295]

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292. Plaintiff's Admissions 14, 15, R. III: 54.

293. Plaintiff's Admission 11, R. III: 53-54; Plaintiff's Answer in Interrogatory 33, R. III: 48; Witness H. Ransburg, R. III: 205; Roche Deposition, R. III: 243-44.

294. Plaintiff's Answers to Interrogatories 27, 28, 33, R. III: 45-48; Roche Deposition, R. III: 222-27; Baur Deposition, R. III: 254; Hedger Deposition, R. III: 255-58.

295. Roche Deposition, R. III: 243-44; Baur Deposition, R. III: 252-54; Rice Deposition, R. III: 261-62; Plaintiff's Answers to Interrogatories 27, 28, R. III: 45-48.

82. Defendant dominates the marketing in the United States of airless electrostatic spray-coating systems, by virtue of the monopoly created by its patents.[296] The defendant has never extended or enlarged said patent monopoly beyond its proper scope.[297] Neither has the defendant a monopoly in any articles of commerce, except the atomizing heads which were specially designed for and have no other use than in defendant's airless electrostatic process.[298]

83. Any article which can be coated by an airless electrostatic system can be coated by means of a compressed-air electrostatic system or by non-electrostatic compressed air guns, operated manually or automatically, the major advantage of the airless electrostatic system over the others, being economic.[299] In painting many articles of manufacture, airless electrostatic, air-type electrostatic, non-electrostatic air-spray systems, flow-coating, roller-coating or dipping, can and are substituted one for the other and are competitive.[300] In the year 1957, the total cost of all paint, varnish and lacquer used industrially in the United States was $643,889,000.[301] The total cost of all paint, var-

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296. Roche Deposition, R. III: 245-46; Hedger Deposition, R. III: 258-59; Dxs. 3, 4, R. II: 1021-35.

297. Entire record.

298. Entire record.

299. Plaintiff's Answers to Interrogatories 34, 131, 132, 136, 317, R. III: 48-50; Witness H. Ransburg, R. III: 201-03.

300. Rice Deposition, R. III: 262-64; Houlberg Deposition, R. III: 270-73; Witness H. Ransburg, R. III: 200-03.

301. Survey of Current Business (p. S-26), Office of Business Economics, U. S. Department of Commerce, June, 1958.

The Court may judicially notice statistics from official Bureau of Census publications. *Denney* v. *State, ex rel. Basler* (1895), 144 Ind. 503, 525, 42 N. E. 929; *Huntington* v. *Cast* (1898), 149 Ind. 255, 48 N. E. 1025.

nish and lacquer used in that year in defendant's No. 2 Process equipment by its licensees was $6,693,642, or approximately 1% of the total, and the total cost of such material used in that year in air-type electrostatic equipment under defendant's licenses was $3,725,857, or approximately 0.6% of the aforesaid total.[302]

84. Since its incorporation, defendant has employed a total of approximately 45 versions of the equipment and non-equipment license forms for its coating processes, most revisions being minor in nature.[303] So that defendant, and all of its licensees, might share in the use of any improvements developed by licensees who had the advantage of the use of the No. 2 Process in its early field experience, the forms employed from April, 1951, to January, 1955, to license its use included a requirement in substance that the licensee grant back to defendant a royalty-free, non-assignable, non-exclusive license, with right to sublicense, under any patents, inventions, or improvements acquired by licensee during the term of the agreement, and within two years thereafter, relating to air-less electrostatic coating methods and/or apparatus.[304] Some of said license agreements are still in effect, but said grant-back clause has not been included in defendant's forms since January, 1955.[305] Defendant has never acquired any patent or patent right pursuant to said clause in said

302. Witness Howarth, R. III: 131-33.

303. Defendant's Admissions 18, 19, 48, R. I: 196-97, 201; Defendant's Answer to Interrogatory 8 (Exs. D-32 to -38, inclusive), R. I: 145-51, R. III: 24-44.

304. Defendant's Answer to Interrogatory 8, R. I: 46.

305. H. Ransburg Deposition, R. I: 536; Defendant's Answer to Interrogatory 8 (Exs. D-23 to -31, inclusive), R. I: 114-44, R. III: 18-23.

agreement forms.[306] Said clause has not stifled or discouraged research or invention by licensees.[307]

85. The defendant has never leased equipment to any person upon the condition, agreement, or understanding that the lessee should not use or deal in the equipment of a competitor or competitors of the defendant.[308]

86. In granting licenses under its patents, including the patents in suit, defendant impliedly represents to the trade and in interstate commerce, that it is the exclusive owner of the inventions covered by its patents.[309] The defendant never represents that it exclusively owns any other or greater monopoly.[310]

87.[311] For the purpose of enabling manufacturers of paint and other coating materials to adapt their products for use in defendant's systems, defendant has granted to several of such manufacturers licenses to use the process upon uniform terms which differ from those of defendant's standard forms, the principal difference being that the initial fee is lower and no monthly fees are payable. These licenses are for experimental and development work in paint formulation, and are not for production-line finishing. On occasion, one or more of such paint manufacturers

306. E. Ransburg Deposition, R. I: 534-35.

307. Entire record.

308. Entire record.

309. Defendant's Answer to Interrogatory 8 (Exs. D-23 to -38, inclusive), R. I: 114-51, R. III: 18-44.

310. Entire record.

311. Since Petitioner has raised no questions on the subject matter of this Finding, no record references are cited in supported thereof.

has advertised that its product is suitable for use in defendant's process. Such advertising has not been solicited by defendant and is not a condition of any of the aforesaid licenses. None of said licenses, or any of said advertising, has damaged plaintiff in any way.

88. The defendant has never conspired with anyone to restrain trade, or to create a monopoly, or to commit any act of unfair competition to plaintiff's damage.[312]

89. The defendant's program or method of licensing the use of its processes or leasing its equipment, or any of its policies related thereto, considered individually or collectively, has not had the effect of enlarging or extending its patent monopoly beyond the scope contemplated by said patents.[313]

90. The issuance and existence of the Starkey-Ransburg method patent 2,685,536, and the failure of plaintiff to obtain a license thereunder to make and sell equipment for the practice of the patented process on terms preferred by plaintiff, rather than any unlawful business practice of the defendant, prevented the only attempted sale by plaintiff of its SK661 emitter and related equipment, and caused plaintiff to desist from further sales efforts.[314]

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312. Entire record.

313. Entire record.

314. Roche Deposition, R. I: 679-80; R. III: 239, 243, 245-50.

Alleged Knowledge by Defendant of Relevant Prior Art and Withholding Thereof from Patent Office Concerning the Defendant's Patents in Issue.

91. The defendant, during prosecution of the applications which resulted in the patents in suit, made no material negligent or willful misrepresentations of the Patent Office or withheld from the Patent Office knowledge of pertinent prior art. Defendant did not have knowledge of any prior art more pertinent than the Darrah patent, and that patent was known to the Patent Office.

92. The defendant did not fail to disclaim claims of the patents in issue that were covered by anticipated prior art.

93. The defendant in prosecuting the applications voluntarily cancelled some claims in the applications which issued as the patents in issue but the defendant in no way expressly or impliedly cancelled the remaining claims and particularly claim four in issue which covers plaintiff's emitter.

94. It is unnecessary to find the facts pertinent to defendant's second defense to the plaintiff's cross-counterclaim in view of the findings set forth above and the following conclusions of law.

CONCLUSIONS OF LAW

Upon the foregoing findings the Court concludes the law to be as follows:

1. The Court has jurisdiction of the parties and subject matter of the issues of defendant's counterclaim and supplemental counterclaim and plaintiff's defenses thereto; and of plaintiff's cross-counterclaim and defendant's defenses thereto.

2. The defendant has maintained its burden of proof of the essential facts of defendant's counterclaim and supplemental counterclaim. The plaintiff has not maintained the burden of proof of the essential facts of any one of plaintiff's affirmative defenses to defendant's counterclaim and/or supplemental counterclaim. The law is with the defendant and against the plaintiff on each of the issues of defendant's counterclaim and supplemental counterclaim and plaintiff's defenses thereto.

3. The plaintiff has not maintained the burden of proof of the essential facts of plaintiff's cross-counterclaim. The law is with the defendant and against the plaintiff on each of the issues of plaintiff's cross-counterclaim and defendant's first defense thereto.

4. It is unnecessary to and the Court does not conclude on the defendant's second defense to the plaintiff's cross-counterclaim in view of these findings and conclusions.

5. United States Letters Patent No. 2,685,536, entitled "Method for Electrostatically Coating Articles," as to claims 1 to 6, 8, 10, and 11 herein suit, is in all respects valid.

6. Plaintiff has infringed the aforesaid patent by using and practicing the method or process thereof.

7. United States Letters Patent No. 2,794,417, entitled "Apparatus for Electrostatically Coating Articles" as to claim 4, here in suit, is in all respects valid.

8. Plaintiff has infringed the aforesaid patent by making and using the apparatus thereof.

9. Defendant is entitled to: (a) an injunction against the plaintiff enjoining further infringement, direct or contributory of each of the patents described in conclusions 5 and 7, and (b) a judgment for damages as provided by Title 35, U.S.C., Sections 284-285, including reasonable attorneys' fees, costs, and interest, and for an accounting to ascertain the amount thereof for such infringement of each of the patents described in conclusions 5 and 7 and the cause is continued as to these issues pursuant to the stipulation of the parties and Rule 42(b) of the Federal Rules of Civil Procedure.*

10. The defendant is entitled to judgment on said cross-counterclaim, and to recover its costs from the plaintiff.

11. Every finding of fact deemed a conclusion of law is hereby adopted as a conclusion of law.

Dated this 16th day of June, 1959.

CALE J. HOLDER

CALE J. HOLDER, *Judge, United States District Court Southern District of Indiana*

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* This conclusion is corrected in accordance with the Court's entry of June 18, 1959, R. II: 1016.

EXCERPT FROM JUVINALL PATENT NO. 2,839,425

FILED NOVEMBER 23, 1951 and ISSUED JUNE 17, 1958

to the speed of article movement, the three dynamic patterns produced respectively by the head when in the three positions A, B, and C will blend to produce on the article 70 a coating of satisfactory uniformity.

In all embodiments of the invention specifically described above, it is contemplated that the spray axes will be normal to the direction of article-travel; but it should be noted that some tipping of any spray-axis in a plane parallel to such direction will not significantly alter the lateral distribution of the coating material. If the spray-axis is so inclined, the deposited static pattern will be elliptical rather than circular, and its major axis will be parallel to the direction of article movement. The dynamic pattern produced will not differ materially, however, from the dynamic pattern produced by a spray arranged with its axis normal to the article-path and having the same transverse extent at the article surface.

I claim as my invention:

1. A method of coating the surface of an article, comprising moving the article over a predetermined path with its surface presented to receive three annular sprays of coating material capable of producing on such surface parallel bands each having two transversely spaced portions of maximum thickness, said sprays being spaced from each other laterally of the path of article movement, two of said sprays having approximately equal diameters smaller than the diameter of the third spray, with all of said sprays being so disposed transversely of the article-path that the individual bands they respectively produce partially overlap each other to produce a composite band having a width greater than but less than twice the width of any individual band, with the portions of maximum thickness of the individual bands being arranged transversely of the composite band to present in order one maximum thickness portion of the first smaller band, one maximum thickness portion of the larger band, one maximum thickness portion of the second smaller band, the other maximum thickness portion of the first smaller band, the other maximum thickness portion of the larger band and then the other maximum thickness portion of the second smaller band.

2. A method of coating the surface of an article, comprising moving the article over a predetermined path with its surface presented to receive three annular sprays of coating material capable of producing on such surface parallel bands each having laterally spaced portions of maximum thickness, said sprays being spaced from each other laterally of the path of article movement, the two outer ones of said sprays having approximately equal diameters and being offset from each other transversely of said path by a distance equal to between 25% and 65% of the distance between the points of maximum thickness of the band produced by either of said sprays, and said latter distance being between 65% and 90% of the distance between the points of maximum thickness of the band produced by the third spray, the axis of the third spray being located transversely of said path substantially midway between the axes of the other sprays.

3. A method as set forth in claim 1 with the addition that said sprays comprise electrically charged coating-material particles, the article being maintained at a potential which will cause it to attract such particles, and said sprays being spaced apart longitudinally of the path of article-movement.

4. A method as set forth in claim 3 with the addition that said sprays are formed by electrostatic atomization.

5. A method as set forth in claim 2 with the addition that said sprays comprise electrically charged coating-material particles, the article being maintained at a potential which will cause it to attract such particles, and said sprays being spaced apart longitudinally of the path of article-movement.

6. A method as set forth in claim 5 with the addition that said sprays are formed by electrostatic atomization.

7. A method of coating an article, comprising moving the article over a predetermined path, directing toward said path from each of three sources located on the same side of the path an annular spray of coating material, said sources being offset from each other transversely of said path, the spray from one of said sources having at the surface of the article a diameter larger than that of the spray from either of the other two sources, the offset distance between the most widely separated of the sources being less than the diameter at the surface of the article of the spray from any of such sources.

8. In electrostatic coating apparatus, a conveyor for moving over a predetermined path an article to be coated, means disposed at one side of said path for directing theretoward three annular sprays of charged coating-material particles for attraction to and deposition on the article, said means comprising three annular atomizing heads, one of said heads being larger than the other two and being located such that the center line of the spray it projects is substantially coplanar with the longitudinal center line of the article-surface to be coated, the other two heads being offset transversely of said path in opposite directions from the first mentioned head a distance less than the diameter of the spray pattern produced on the article by either of said other heads and so oriented that the bands of coating material produced on the article by the three sprays will overlap each other.

9. The invention set forth in claim 8 with the addition that said heads are spaced from each other longitudinally of said path.

10. A method of coating the surface of an article, comprising moving the article over a predetermined path with its surface presented to receive three annular sprays of coating material capable of producing on such surface parallel bands each having two transversely spaced portions of maximum thickness, said sprays being spaced from each other laterally of the path of article movement, and being so disposed transversely of the article path that the individual bands respectively produced partially overlap each other to produce a composite band having a width greater than but less than twice the width of any individual band, to present in order transversely of the composite band one of the maximum thickness portions of each of the bands and then the other maximum thickness portions of each of the bands.

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